

**H.R. 4664, AS REPORTED**  
**BY THE SUBCOMMITTEE ON RESEARCH**  
**ON MAY 9, 2002**

Strike all after the enacting clause and insert the following:

**1 SECTION 1. SHORT TITLE.**

2       This Act may be cited as the “Investing in America’s  
3 Future Act of 2002”.

**4 SEC. 2 DEFINITIONS.**

5       In this Act:

6           (1) BOARD.—The term “Board” means the Na-  
7 tional Science Board established under section 2 of  
8 the National Science Foundation Act of 1950 (42  
9 U.S.C. 1861).

10          (2) DIRECTOR.—The term “Director” means  
11 the Director of the National Science Foundation.

12          (3) FOUNDATION.—The term “Foundation”  
13 means the National Science Foundation.

14          (4) INSTITUTION OF HIGHER EDUCATION.—The  
15 term “institution of higher education” has the  
16 meaning given that term in section 101(a) of the  
17 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

18          (5) NATIONAL RESEARCH FACILITY.—The term  
19 “national research facility” means a research facility

1 funded by the Foundation which is available, subject  
2 to appropriate policies allocating access, for use by  
3 all scientists and engineers affiliated with research  
4 institutions located in the United States.

5 (6) UNITED STATES.—The term “United  
6 States” means the several States, the District of Co-  
7 lumbia, the Commonwealth of Puerto Rico, the Vir-  
8 gin Islands, Guam, American Samoa, the Common-  
9 wealth of the Northern Mariana Islands, and any  
10 other territory or possession of the United States.

11 **SEC. 3. AUTHORIZATION OF APPROPRIATIONS.**

12 (a) FISCAL YEAR 2003.—

13 (1) IN GENERAL.—There are authorized to be  
14 appropriated to the National Science Foundation  
15 \$5,515,260,000 for fiscal year 2003.

16 (2) SPECIFIC ALLOCATIONS.—Of the amount  
17 authorized under paragraph (1)—

18 (A) \$4,138,440,000 shall be made avail-  
19 able to carry out Research and Related Activi-  
20 ties, of which—

21 (i) \$704,000,000 shall be for net-  
22 working and information technology re-  
23 search;

1 (ii) \$238,450,000 shall be for the  
2 Nanoscale Science and Engineering Pri-  
3 ority Area;

4 (iii) \$60,090,000 shall be for the  
5 Mathematical Sciences Priority Area; and

6 (iv) \$75,900,000 shall be for Major  
7 Research Instrumentation;

8 (B) \$1,006,250,000 shall be made avail-  
9 able for Education and Human Resources;

10 (C) \$152,350,000 shall be made available  
11 for Major Research Equipment and Facilities  
12 Construction;

13 (D) \$210,160,000 shall be made available  
14 for Salaries and Expenses; and

15 (E) \$8,060,000 shall be made available for  
16 the Office of Inspector General.

17 (b) FISCAL YEAR 2004.—

18 (1) IN GENERAL.—There are authorized to be  
19 appropriated to the National Science Foundation  
20 \$6,342,550,000 for fiscal year 2004.

21 (2) SPECIFIC ALLOCATIONS.—Of the amount  
22 authorized under paragraph (1)—

23 (A) \$4,735,600,000 shall be made avail-  
24 able to carry out Research and Related Activi-  
25 ties, of which—

1 (i) \$774,000,000 shall be for net-  
2 working and information technology re-  
3 search;

4 (ii) \$286,140,000 shall be for the  
5 Nanoscale Science and Engineering Pri-  
6 ority Area;

7 (iii) \$90,090,000 shall be for the  
8 Mathematical Sciences Priority Area; and

9 (iv) \$85,000,000 shall be for Major  
10 Research Instrumentation;

11 (B) \$1,157,190,000 shall be made avail-  
12 able for Education and Human Resources;

13 (C) \$225,000,000 shall be made available  
14 for Major Research Equipment and Facilities  
15 Construction;

16 (D) \$216,460,000 shall be made available  
17 for Salaries and Expenses; and

18 (E) \$8,300,000 shall be made available for  
19 the Office of Inspector General.

20 (c) FISCAL YEAR 2005.—

21 (1) IN GENERAL.—There are authorized to be  
22 appropriated to the National Science Foundation  
23 \$7,293,930,000 for fiscal year 2005.

24 (2) SPECIFIC ALLOCATIONS.—Of the amount  
25 authorized under paragraph (1)—

1 (A) \$5,445,940,000 shall be made avail-  
2 able to carry out Research and Related Activi-  
3 ties;

4 (B) \$1,330,770,000 shall be made avail-  
5 able for Education and Human Resources;

6 (C) \$285,710,000 shall be made available  
7 for Major Research Equipment and Facilities  
8 Construction;

9 (D) \$222,960,000 shall be made available  
10 for Salaries and Expenses; and

11 (E) \$8,550,000 shall be made available for  
12 the Office of Inspector General.

13 **SEC. 4. OBLIGATION OF MAJOR RESEARCH EQUIPMENT**  
14 **FUNDS.**

15 (a) FISCAL YEAR 2003.—None of the funds author-  
16 ized under section 3(a)(2)(C) may be obligated until 30  
17 days after the first report required under section 7(a)(2)  
18 is transmitted to the Congress.

19 (b) FISCAL YEAR 2004.—None of the funds author-  
20 ized under section 3(b)(2)(C) may be obligated until 30  
21 days after the report required by June 15, 2003, under  
22 section 7(a)(2) is transmitted to the Congress.

23 (c) FISCAL YEAR 2005.—None of the funds author-  
24 ized under section 3(c)(2)(C) may be obligated until 30

1 days after the report required by June 15, 2004, under  
2 section 7(a)(2) is transmitted to the Congress.

3 **SEC. 5. ANNUAL PLAN FOR ALLOCATION OF FUNDING.**

4 Not later than 60 days after the date of enactment  
5 of legislation providing for the annual appropriation of  
6 funds for the Foundation, the Director shall submit to the  
7 Committee on Science of the House of Representatives,  
8 the Committee on Commerce, Science, and Transportation  
9 of the Senate, and the Committee on Health, Education,  
10 Labor, and Pensions of the Senate, a plan for the alloca-  
11 tion of funds authorized by this Act for the corresponding  
12 fiscal year. The portion of the plan pertaining to Research  
13 and Related Activities shall include a description of how  
14 the allocation of funding will—

15 (1) affect the average size and duration of re-  
16 search grants supported by the Foundation by field  
17 of science, mathematics, and engineering;

18 (2) affect trends in research support for major  
19 fields and subfields of the physical sciences, mathe-  
20 matics, and engineering, including for emerging mul-  
21 tidisciplinary research areas; and

22 (3) ensure that research in the physical  
23 sciences, mathematics, and engineering is adequate  
24 to address important research opportunities in these  
25 fields.

1   **SEC. 6. PROPORTIONAL REDUCTION.**

2           (a) OVERALL AMOUNTS.—If the amount appro-  
3   priated pursuant to section 3(a)(1), (b)(1), or (c)(1) is less  
4   than the amount authorized under that paragraph, the  
5   amount available under each subparagraph of paragraph  
6   (2) of that subsection shall be reduced by the same propor-  
7   tion.

8           (b) RESEARCH AND RELATED ACTIVITIES  
9   AMOUNTS.—If the amount appropriated pursuant to sec-  
10   tion 3(a)(2)(A) or (b)(2)(A) is less than the amount au-  
11   thorized under that subparagraph, the amount available  
12   under each clause of that subparagraph shall be reduced  
13   by the same proportion.

14   **SEC. 7. NATIONAL RESEARCH FACILITIES.**

15           (a) PRIORITIZATION OF PROPOSED MAJOR RE-  
16   SEARCH EQUIPMENT AND FACILITIES CONSTRUCTION.—

17               (1) DEVELOPMENT OF PRIORITIES.—

18                   (A) LIST.—The Director shall develop a  
19           list indicating by number the relative priority  
20           for funding under the Major Research Equip-  
21           ment and Facilities Construction account that  
22           the Director assigns to each project the Board  
23           has approved for inclusion in a future budget  
24           request. The Director shall submit the list to  
25           the Board for approval.

1 (B) UPDATES.—The Director shall update  
2 the list prepared under paragraph (1) each time  
3 the Board approves a new project that would  
4 receive funding under the Major Research  
5 Equipment and Facilities Construction account  
6 and as necessary to prepare reports under para-  
7 graph (2). The Director shall submit any up-  
8 dated list to the Board for approval.

9 (2) ANNUAL REPORT.—Not later than 90 days  
10 after the date of the enactment of this Act, and not  
11 later than each June 15th thereafter, the Director  
12 shall transmit to the Congress a report containing—

13 (A) the most recent Board-approved pri-  
14 ority list developed under paragraph (1);

15 (B) a description of the criteria used to de-  
16 velop such list; and

17 (C) a description of the major factors for  
18 each project that determined its ranking on the  
19 list, based on the application of the criteria de-  
20 scribed pursuant to subparagraph (B).

21 (3) CRITERIA.—The criteria described pursuant  
22 to paragraph (2)(B) shall include, at a minimum—

23 (A) scientific merit;

24 (B) broad societal need and probable im-  
25 pact;



1 (C) consideration of the results of formal  
2 prioritization efforts by the scientific commu-  
3 nity;

4 (D) readiness of plans for construction and  
5 operation;

6 (E) international and interagency commit-  
7 ments; and

8 (F) the order in which projects were ap-  
9 proved by the Board for inclusion in a future  
10 budget request.

11 (b) FACILITIES PLAN.—

12 (1) IN GENERAL.—Section 201(a)(1) of the Na-  
13 tional Science Foundation Authorization Act of 1998  
14 (42 U.S.C. 1862l(a)(1)) is amended to read as fol-  
15 lows:

16 “(1) IN GENERAL.—The Director shall prepare,  
17 and include as part of the Foundation’s annual  
18 budget request to Congress, a plan for the proposed  
19 construction of, and repair and upgrades to, national  
20 research facilities, including full life-cycle cost infor-  
21 mation.”.

22 (2) CONTENTS OF PLAN.—Section 201(a)(2) of  
23 the National Science Foundation Authorization Act  
24 of 1998 (42 U.S.C. 1862l(a)(2)) is amended—

1 (A) in subparagraph (A), by inserting “,  
2 including costs for instrumentation develop-  
3 ment” after “described in paragraph (1)”;

4 (B) by striking “and” at the end of sub-  
5 paragraph (B);

6 (C) by striking the period at the end of  
7 subparagraph (C) and inserting a semicolon;  
8 and

9 (D) by adding at the end the following new  
10 subparagraphs:

11 “(D) for each project funded under the  
12 Major Research Equipment and Facilities Con-  
13 struction account—

14 “(i) estimates of the total project cost  
15 (from planning to commissioning); and

16 “(ii) the source of funds, including  
17 Federal funding identified by appropria-  
18 tions category and non-Federal funding;

19 “(E) estimates of the full life-cycle cost of  
20 each national research facility;

21 “(F) information on any plans to retire na-  
22 tional research facilities; and

23 “(G) estimates of funding levels for grants  
24 supporting research that will make use of each  
25 national research facility.”.

1           (3) DEFINITION.—Section 2 of the National  
2       Science Foundation Authorization Act of 1998 (42  
3       U.S.C. 1862k note) is amended—

4                   (A) by redesignating paragraphs (3)  
5           through (5) as paragraphs (4) through (6), re-  
6           spectively; and

7                   (B) by inserting after paragraph (2) the  
8           following new paragraph:

9           “(3) FULL LIFE-CYCLE COST.—The term “full  
10       life-cycle cost” means all costs of development, pro-  
11       curement, construction, operations and support, and  
12       shut down costs, without regard to funding source  
13       and without regard to what entity manages the  
14       project.”.

15       (c) PROJECT MANAGEMENT.—No national research  
16       facility project funded under the Major Research Equip-  
17       ment and Facilities Construction account shall be man-  
18       aged by an individual whose appointment to the Founda-  
19       tion is temporary.

20       **SEC. 8. MAJOR RESEARCH INSTRUMENTATION.**

21       The Foundation shall conduct a review and assess-  
22       ment of the Major Research Instrumentation Program  
23       and provide a report to Congress on its findings and rec-  
24       ommendations within 1 year after the date of the enact-  
25       ment of this Act. The report shall include—

1 (1) estimates of the needs, by major field of  
2 science and engineering, of institutions of higher  
3 education for the types of research instrumentation  
4 that are eligible for funding under the guidelines of  
5 the Major Research Instrumentation Program;

6 (2) the distribution of awards and funding lev-  
7 els by year and by major field of science and engi-  
8 neering for the Major Research Instrumentation  
9 Program, since the inception of the Program; and

10 (3) an analysis of the impact of the Major Re-  
11 search Instrumentation Program on the research in-  
12 strumentation needs that were documented in the  
13 Foundation's 1994 survey of academic research in-  
14 strumentation needs.

15 **SEC. 9. ASTRONOMY AND ASTROPHYSICS ADVISORY COM-**  
16 **MITTEE.**

17 (a) ESTABLISHMENT.—The Foundation and the Na-  
18 tional Aeronautics and Space Administration shall jointly  
19 establish an Astronomy and Astrophysics Advisory Com-  
20 mittee (in this section referred to as the “Advisory Com-  
21 mittee”).

22 (b) DUTIES.—The Advisory Committee shall—

23 (1) assess, and make recommendations regard-  
24 ing, the coordination of astronomy and astrophysics

1 programs of the Foundation and the National Aero-  
2 nautics and Space Administration;

3 (2) assess, and make recommendations regard-  
4 ing, the status of the activities of the Foundation  
5 and the National Aeronautics and Space Administra-  
6 tion as they relate to the recommendations contained  
7 in the National Research Council's 2001 report enti-  
8 tled "Astronomy and Astrophysics in the New Mil-  
9 lennium", and the recommendations contained in  
10 subsequent National Research Council reports of a  
11 similar nature; and

12 (3) not later than March 15 of each year,  
13 transmit a report to the Director, the Administrator  
14 of the National Aeronautics and Space Administra-  
15 tion, and the Congress on the Advisory Committee's  
16 findings and recommendations under paragraphs (1)  
17 and (2).

18 (c) MEMBERSHIP.—The Advisory Committee shall  
19 consist of 13 members, none of whom shall be a Federal  
20 employee, including—

21 (1) 5 members selected by the Foundation;

22 (2) 5 members selected by the National Aero-  
23 nautics and Space Administration; and

24 (3) 3 members selected by the members selected  
25 under paragraphs (1) and (2).

1 (d) SELECTION PROCESS.—Initial selections under  
2 subsection (c)(1) and (2) shall be made within 3 months  
3 after the date of the enactment of this Act. Initial selec-  
4 tions under subsection (c)(3) shall be made within 5  
5 months after the date of the enactment of this Act. Vacan-  
6 cies shall be filled in the same manner as provided in sub-  
7 section (c).

8 (e) CHAIRPERSON.—The Advisory Committee shall  
9 select a chairperson from among its members.

10 (f) COORDINATION.—The Advisory Committee shall  
11 coordinate with the advisory bodies of other Federal agen-  
12 cies, such as the Department of Energy, which may en-  
13 gage in related research activities.

14 (g) COMPENSATION.—The members of the Advisory  
15 Committee shall serve without compensation, but shall re-  
16 ceive travel expenses, including per diem in lieu of subsist-  
17 ence, in accordance with sections 5702 and 5703 of title  
18 5, United States Code.

19 (h) MEETINGS.—The Advisory Committee shall con-  
20 vene, in person or by electronic means, at least 4 times  
21 a year.

22 (i) QUORUM.—

23 (1) IN GENERAL.—Except as provided in para-  
24 graph (2), a majority of the members serving on the  
25 Advisory Committee shall constitute a quorum for

1 purposes of conducting the business of the Advisory  
2 Committee.

3 (2) EXCEPTION.—The selection of a member  
4 under subsection (c)(3) shall require a vote of  $\frac{3}{4}$  of  
5 the members appointed under subsection (c)(1) and  
6 (2).

7 (j) DURATION.—Section 14 of the Federal Advisory  
8 Committee Act shall not apply to the Advisory Committee.

9 **SEC. 10. BOARD MEETINGS.**

10 (a) PURPOSE.—The purpose of this section is to en-  
11 sure that the Board complies with the requirements of sec-  
12 tion 552b of title 5, United States Code, that all meetings,  
13 with the exception of specific narrow statutory exemptions,  
14 be open to the public.

15 (b) COMPLIANCE AUDIT.—The Inspector General of  
16 the National Science Foundation shall conduct an annual  
17 audit of the compliance by the Board with the require-  
18 ments described in subsection (a). The audit shall examine  
19 the extent to which the proposed and actual content of  
20 closed meetings is consistent with those requirements.

21 (c) REPORT.—Not later than February 15 of each  
22 year, the Inspector General of the National Science Foun-  
23 dation shall transmit to the Congress the audit required  
24 under subsection (b) along with recommendations for cor-  
25 rective actions that need to be taken to achieve fuller com-

1 pliance with the requirements described in subsection (a),  
2 and recommendations on how to ensure public access to  
3 the Board's deliberations.